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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT RABINER, BRADLEY HARE, REBECCA
MARIANTE, and MARK VARADY

Appeal 2009-005352
Application 10/774,898
Technology Center 3700

Decided: September 10, 2009

Before DONALD E. ADAMS, ERIC GRIMES, and STEPHEN WALSH,
Administrative Patent Judges.

WALSH, *Administrative Patent Judge.*

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) involving claims to an ultrasonic medical device and methods of using the device. The Patent Examiner rejected most of the claims as anticipated and the remaining claims as obvious. We have jurisdiction under 35 U.S.C. § 6(b). We affirm-in-part.

STATEMENT OF THE CASE

The invention is said to provide “an apparatus and a method for an ultrasonic medical device operating in a torsional mode and a transverse mode to treat a biological material.” (Spec. 3: 4-5.) According to the Specification, there is a need for such an apparatus and method to destroy certain biological material in the body in a safe, effective and time efficient manner. (*Id.* at 2-3.) Claims 1, 3-24, 26-34, 36-55, 57-61 and 75-86, which are all the pending claims, are on appeal. Claims 1 and 37 are representative and read as follows:

1. An ultrasonic medical device comprising:

an ultrasonic probe comprising a proximal end, a distal end and a longitudinal axis therebetween; and

a transducer coupled to the ultrasonic probe, the transducer being configured to create a torsional vibration along the ultrasonic probe, the ultrasonic probe and the transducer being adapted so that the torsional vibration induces a transverse vibration along a portion of the ultrasonic probe.

37. [A method comprising:

moving an ultrasonic probe to a treatment site in a body such that the ultrasonic probe is in communication with a biological material; and

producing a torsional vibration along the ultrasonic probe, the torsional vibration inducing a transverse vibration in a portion of the ultrasonic probe]

further comprising tuning the transverse vibration into coincidence with the torsional vibration along the portion of the ultrasonic probe in which the transverse vibration is induced.

The Examiner rejected the claims as follows:

- claims 1, 3-24, 26-34, 36, 40-55, 57-61 and 75-86 under 35 U.S.C. § 102(b) as anticipated by Kuris;¹ and
 - claims 37-39 and 57-58 under 35 U.S.C. § 103(a) as obvious over Kuris and McCullough.²

Claims 3-24, 26-34, 36, 40-55, 57-61 and 75-86 have not been argued separately and therefore stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(vii).

ANTICIPATION

The Anticipation Issue

The Examiner's position is that Kuris taught how to make and use an ultrasonic medical device that had the structure and performed the function recited in claim 1. (Ans. 3.)

Appellants contend that Kuris "fail[ed] to disclose a device that includes a probe and transducer that are adapted so that a torsional vibration created along the probe induces a transverse vibration along the probe." (App. Br. 7.) Appellants also contend that "Kuris' disclosure would not enable one of ordinary skill in the art to make and use a device including a probe and a transducer that are adapted so that a torsional vibration along the probe induces a transverse vibration along the probe." (*Id.* at 9.)

The issues with respect to this rejection are:

¹ U.S. Patent No. 3,565,062, issued to Arthur Kuris, Feb. 23, 1971.

² U.S. Patent No. 6,723,451 B1, issued to Colin McCullough et al., Apr. 20, 2004.

did the Examiner provide sufficient evidence to support the finding that Kuris taught an ultrasonic medical device adapted so that a torsional vibration along the probe induced a transverse vibration along the probe; and

did Appellants provide sufficient evidence to rebut the presumption that Kuris enabled making and using an ultrasonic medical device adapted so that a torsional vibration along the probe induced a transverse vibration along the probe?

Findings of Fact

1. Kuris' patent is entitled "Ultrasonic Method And Apparatus For Removing Cholesterol And Other Deposits From Blood Vessels And The Like."
2. Kuris disclosed an ultrasonic probe 43 comprising a proximal end 45 and a distal end 50. (Fig. 6.)
3. The Examiner found that Kuris' tubular probe with a proximal end and a distal end necessarily had a longitudinal axis along its length. (Ans. 3.)
4. Kuris' device had an ultrasonic motor 41 that included a transducer. (Col. 6, ll. 36-50.)
5. Kuris taught that "the active tool output surface enjoys transverse vibration, compressional vibration, flexural vibrations or torsional vibrations or even combinations of said vibrations." (Col. 4, ll. 42-51.)

Principles of Law Relating to Anticipation

“To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently.” *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997) (citations omitted).

[W]here the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

Id., 128 F.3d at 1478, quoting *In re Swinehart*, 439 F.2d 210, 213 (CCPA 1971).

The test for anticipation “is not an ‘ipsissimis verbis’ test.” *In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990).

In patent prosecution the examiner is entitled to reject application claims as anticipated by a prior art patent without conducting an inquiry into whether or not that patent is enabled or whether or not it is the claimed material (as opposed to the unclaimed disclosures) in that patent that are at issue. *In re Sasse*, 629 F.2d 675, 681, 207 USPQ 107, 111 (C.C.P.A. 1980) (“[W]hen the PTO cited a disclosure which expressly anticipated the present invention ... the burden was shifted to the applicant. He had to rebut the presumption of the operability of [the prior art patent] by a preponderance of the evidence.” (citation omitted)). The applicant, however, can then overcome that rejection by proving that the relevant disclosures of the prior art patent are not enabled.

Amgen Inc. v. Hoechst Marion Roussel, Inc., 314 F.3d 1313, 1355 (Fed. Cir. 2003) (footnote omitted).

Analysis of the Anticipation Issue

Kuris disclosed the structural elements recited in claim 1. (FF 2-4.) By pointing to Kuris' express disclosure of various modes of vibration, including torsional and transverse and combinations, the Examiner properly shifted the burden to Appellants to prove that Kuris' transducer was not adapted so that the torsional vibration induces a transverse vibration along a portion of the ultrasonic probe. *See Schreiber*, 128 F.3d at 1478.

Kuris' patent disclosure is presumed enabled. *Amgen*, 314 F.3d at 1355. Appellants bore the burden of rebutting the presumption of enablement by a preponderance of the evidence. *Id.* Although Appellants deny that Kuris was enabling, Appellants provide no evidence. In the absence of evidence establishing that Kuris' torsional vibrations could not induce transverse vibrations along the probe, we find that Appellants have not rebutted the presumption of operability. We find that the Examiner established a *prima facie* case of anticipation and that Appellants did not rebut it.

OBVIOUSNESS

The Obviousness Issue

The Examiner's position is that Kuris taught the claimed method "with the exception of the method steps of tuning the vibrations." (Ans. 6.) The Examiner found that McCullough taught tuning a horn by altering its length, and concluded that it would have been obvious "to modify the methods taught in Kuris in view of the teaching of McCullough to obtain a desired vibration frequency." (*Id.*)

Appellants contend that “after reading Kuris and McCullough, one of ordinary skill would not have modified the method of use described in Kuris to include this feature of Applicants’ claims.” (App. Br. 10.) According to Appellants, “[t]here is simply no indication in Kuris or McCullough that such a modification would be beneficial.” (App. Br. 10.)

The issue with respect to this rejection is whether a person of ordinary skill in the art at the time of the invention would have seen a benefit to tuning torsional and transverse vibrations to coincide.

Further Findings of Fact

6. McCullough described making wire cables with ceramic oxide fibers encapsulated in a matrix that included aluminum. (Abstract.)
7. McCullough’s Example 1 described an encapsulation step that included pulling a band of fibers through molten aluminum. (Col. 14, ll. 24-27.)
8. McCullough enhanced molten aluminum infiltration into the fiber band by applying ultrasonic vibration with a horn. (*Id.* at ll. 29-32.)
9. McCullough tuned the horn to a desired frequency by altering its length. (*Id.* at ll. 35-36.)

Principles of Law Relating to Obviousness

A rejection for obviousness must include “articulated reasoning with some rational underpinning to support the legal conclusion.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007), quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). The proper question to ask is whether a person of ordinary skill in the art, facing the wide range of needs created by

developments in the field of endeavor, would have seen a benefit to combining the prior art teachings. *KSR*, 550 U.S. at 424. “[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person’s skill.” *KSR*, 550 U.S. at 401.

Analysis of the Obviousness Issue

Each of claims 37-39, 57, and 58 requires tuning the transverse vibration into coincidence with the torsional vibration. We find that the Examiner did not establish that a person of ordinary skill in the ultrasonic medical device art, informed by Kuris’ disclosure, would have seen a benefit to tuning torsional and transverse vibrations to coincide. We also find that the Examiner did not establish that a person of ordinary skill in the art at the time of the invention would have considered that McCullough’s method of tuning a horn to emit a chosen wavelength was similar to or applicable to tuning torsional and transverse vibrations in a medical probe to coincide. We conclude that the Examiner did not establish a *prima facie* case of obviousness.

CONCLUSIONS OF LAW

The Examiner’s evidence was sufficient to support the finding that Kuris taught an ultrasonic medical device adapted so that a torsional vibration along the probe induced a transverse vibration along the probe.

Appellants did not provide evidence to rebut the presumption that Kuris enabled making and using an ultrasonic medical device adapted so that

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a torsional vibration along the probe induced a transverse vibration along the probe.

The Examiner did not establish a prima facie case of obviousness for claims 37-39, 57, and 58.

SUMMARY

We affirm the rejection of claims 1, 3-24, 26-34, 36, 40-55, 57-61 and 75-86 under 35 U.S.C. § 102(b) as anticipated by Kuris; and

We reverse the rejection of claims 37-39 and 57-58 under 35 U.S.C. § 103(a) as obvious over Kuris and McCullough.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED-IN-PART

dm

FISH & RICHARDSON PC
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022